

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-36 (canceled).

Claim 37 (currently amended): ~~A self-supported fibrin material~~ An elongated structure comprising a solely mammalian-derived fibrin material ~~an elongated structure~~, wherein a portion of the self-supported fibrin material is stretched along a longitudinal axis.

Claim 38 (currently amended): The ~~self-supported fibrin material~~ elongated structure of claim 37, wherein the structure is made of a material selected from the group consisting of preformed fibrin, fibrinogen, chondroitin-4, sulfate, dermatan sulfate, keratan sulfate, hyaluronic acid, chitosan, chitin, alginate, laminin, elastin, fibronectin, collagen, ~~organic polymer~~, peptide, derivatives thereof, and mixtures thereof.

Claim 39 (currently amended): The ~~self-supported fibrin material~~ elongated structure of claim 37, wherein the stretched portion of the structure is porous.

Claim 40 (currently amended): The ~~self-supported fibrin material~~ elongated structure of claim 37, wherein the material of the stretched portion of the structure has a first fiber density in the stretching direction and a second fiber density in the direction perpendicular to the stretching direction, the first density different than the second density ~~at least two densities which are different from each other.~~

Claim 41 (currently amended): The ~~fibrin material~~ elongated structure of claim 40, wherein the first fiber density is at least 1.5 times greater than the second fiber density.

Claim 42 (currently amended): The ~~fibrin material~~ elongated structure of claim 40, wherein the first fiber density is at least 2 times greater than the second fiber density.

Claim 43 (currently amended): The ~~fibrin material~~ elongated structure of claim 40, wherein the first fiber density is at least 5 times greater than the second fiber density.

Claim 44 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the elongated structure has a shape selected from the group consisting of thread, tube, hollow profile, film, fleece, sponge and membrane.

Claim 45 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the stretched portion has a shape selected from the group consisting of thread and tube, said stretched portion having an outer diameter of less than 10 mm.

Claim 46 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the stretched portion has a shape selected from the group consisting of thread and tube, said stretched portion having an outer diameter of less than 3 mm.

Claim 47 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the stretched portion has a shape selected from the group consisting of thread and tube, said stretched portion having an outer diameter of between 100 μm and 2500 μm .

Claim 48 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the stretched portion has a shape of a tube with a central channel substantially parallel to the stretching direction, said central channel having a cross-section perpendicular to the stretched direction with a diameter of less than 15 mm.

Claim 49 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the stretched portion has a shape of a tube with a central channel substantially parallel to the stretching direction, said central channel having a cross-section perpendicular to the stretched direction with a diameter of less than 10 mm.

Claim 50 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the stretched portion has a shape of a tube with a central channel substantially parallel to the stretching direction, said central channel having a cross-section perpendicular to the stretched direction with a diameter of less than 5 mm.

Claim 51 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the stretched portion has a shape of a tube with a central channel substantially parallel to the stretching direction, said central channel having a cross-section perpendicular to the stretched direction with a diameter between 100 μm and 2500 μm .

Claim 52 (currently amended): The ~~fibrin material~~ elongated structure of claim 48, wherein said tube has a wall thickness between 0.1 mm and 5 mm.

Claim 53 (currently amended): The ~~fibrin material~~ elongated structure of claim 48, wherein said tube has a wall thickness between 0.25 mm and 2.5 mm.

Claim 54 (currently amended): The ~~fibrin material~~ elongated structure of claim 48, wherein said tube has a wall thickness between 0.5 mm and 2 mm.

Claim 55 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the amount of fibrin in the material is more than 50%.

Claim 56 (currently amended): The ~~fibrin material~~ elongated structure of claim 37, wherein the elongated structure contains fibrin that is at least partially cross-linked.

Claim 57 (currently amended): A process for the preparation of an elongated structure ~~a self-supported fibrin material~~, comprising the steps of:

providing a first component of a solely mammalian-derived fibrinogen containing material;

providing a second component of a solely mammalian-derived substance having a capability to convert fibrinogen into fibrin;

forming a ~~fibrinogen~~ solely mammalian-derived fibrin containing material by mixing the first component and the second component; and

stretching ~~subjecting the self-supported the~~ fibrin containing material ~~to stretching~~ along a longitudinal axis of the ~~self-supported~~ fibrin containing material.

Claim 58 (currently amended): A process according to claim 57 wherein the first component is selected from the group consisting of preformed fibrin, fibrinogen, chondroitin-4 sulfate, dermatan sulfate, keratan sulfate, hyaluronic acid, chitosan, chitin, alginate, laminin, elastin, fibronectin, collagen, ~~organic polymer~~, peptide, derivatives thereof, and mixtures thereof.

Claim 59 (currently amended): A process according to claim 57 wherein the stretching is sufficient to extend the length of the ~~self-supported~~ fibrin containing material at least 5%.

Claim 60 (currently amended): A process according to claim 57 wherein the stretching is sufficient to extend the length of the ~~self-supported~~ fibrin containing material at least 10%.

Claim 61 (currently amended): A process according to claim 57 wherein the stretching is sufficient to extend the length of the ~~self-supported~~ fibrin containing material at least 25%.

Claim 62 (currently amended): A process according to claim 57, further comprising applying a positive pressure to the fibrin containing material during said forming ~~a drying step~~.

Claim 63 (currently amended): A process according to claim 57, wherein said stretching is accomplished by a treatment selected from the group consisting of extruding the fibrin material, and radiating the fibrin material and freeze-drying the fibrin material ~~at least part of the self-supported fibrin containing material is stretched by mechanical or physical treatment~~

Claim 64 (original): A process according to claim 63, further comprising placing the fibrin containing material in a mold prior to said stretching, ~~wherein the mechanical treatment is one of a compression or an extrusion and the physical treatment is one of an energy treatment or freeze-drying.~~

Claim 65 (canceled).

Claim 66 (currently amended): A process according to ~~claim 57~~, wherein the ~~self-supported fibrin containing material is at least partially stretched in a solution containing a cross-linking agent~~ claim 64 further comprising adding a cross-linking agent to the mold prior to said stretching.

Claim 67 (currently amended): A process according to claim 57, ~~wherein the self-supported fibrin containing material is mechanically or physically treated in dies or in a mold so as to obtain~~ further comprising forming the fibrin containing material into an article having a shape selected from the group consisting of thread, tube, hollow profile, film, fleece, sponge and membrane ~~a thread, a tube, a hollow profile, a film, a fleece, a sponge and a membrane.~~

Claim 68 (currently amended): A process according to ~~claim 57~~ claim 63, further comprising removing ~~wherein the self-supported fibrin containing material contains free water from the fibrin containing material prior to said stretching, and in which at least part of the free water is removed before the mechanical or physical treatment step.~~

Claim 69 (currently amended): A process according to claim 57, wherein the fibrinogen containing material contains at least a further compound selected from the group consisting of

preformed fibrin, chondroitin-4 sulfate, dermatan sulfate, keratan sulfate, hyaluronic acid, chitosan, chitin, alginate, laminin, elastin, fibronectin, collagen, ~~organic polymer~~, peptide, derivatives thereof, and mixtures thereof.

Claim 70 (currently amended): A process according to claim 57, wherein the ~~self-supported~~ fibrin containing material is prepared from a fibrinogen-containing material as the first component and a solution containing less than 10 IU/ml thrombin as the second component.

Claim 71 (currently amended): A process according to claim 57, wherein the ~~self-supported~~ fibrin containing material is prepared from a fibrinogen-containing material as the first component and a solution containing less than 1 IU/ml thrombin as the second component.

Claim 72 (currently amended): A process according to claim 57, wherein the ~~self-supported~~ fibrin containing material is prepared from solution having a fibrinogen content of at least 3 mg/ml.

Claim 73 (currently amended): A process according to claim 57, wherein the ~~self-supported~~ fibrin containing material is prepared from solution having a fibrinogen content of at least 5 mg/ml.

Claim 74 (currently amended): A process according to claim 57, wherein the ~~self-supported~~ fibrin containing material is prepared from solution having a fibrinogen content of at least 10 mg/ml.

Claim 75 (currently amended): A process according to claim 57, wherein the ~~self-supported~~ fibrin containing material is prepared from a fibrinogen-containing solution containing a calcium complexing agent.

Claim 76 (currently amended): A process according to claim 57, further comprising adding wherein the material from which the structure is made further contains at least an additive selected from the group consisting of protein, genetic material, anticoagulant, inorganic compound, growth factor, cells, anti-inflammatory compound, compound reducing graft rejection, cell growth inhibitor, antibiotic, antiseptic, analgesic, antineoplastic, chemotherapeutic, polypeptide, protease inhibitor, vitamin, cytokine, cytotoxin, interferon, hormone, antibody,

antimicrobial agent, agent for improving the biocompatibility, derivatives thereof, and mixtures thereof.

Claim 77 (currently amended): A process according to claim 57, further comprising wherein the self-supported lyophilizing the fibrin containing material ~~is submitted to lyophilization~~ after said stretching.

Claim 78 (canceled).

Claim 79 (currently amended): The elongated structure of claim 37 wherein the elongated structure is formed into an article selected from the group consisting of a ~~A~~-thread, a tube, a hollow profile article, a film, a fleece, a sponge ~~or and a~~ membrane obtainable by a process according to claim 57.

Claim 80 (currently amended): The elongated structure ~~thread, tube, hollow profile, film, fleece, sponge or membrane~~ of claim 79 wherein the article has a stretched portion ~~is stretched~~ in at least two directions substantially perpendicular to one another.

Claim 81 (currently amended): The elongated structure ~~thread, tube, hollow profile, film, fleece, sponge or membrane~~ of claim 79, wherein the article ~~which~~ is rolled around an axis substantially perpendicular to the longitudinal direction.

Claim 82 (currently amended): A process for the manufacture of a fibrin material ~~shaped article made at least partly of a self-supported fibrin of claim 37~~, comprising the steps of:

providing ~~an aqueous a~~ fibrinogen-containing solution as a first component;

providing an inactivated activatable thrombin in an inactive form as a second component; ~~and~~

mixing the fibrinogen component to the thrombin component to form a mixed component;

adding water to the mixed component to form a hydrated component;

activating the activatable thrombin of the hydrated component to form a fibrin material having a water content wherein substantially no water is removed from the fibrin material when the fibrin material is centrifugated at about 1000 rpm to about 2500 rpm.

~~providing an amount of water in the solution such that after mixing the first and second component to form a gel, substantially no water can be removed when submitting the gel to a centrifugation of 1,000 rounds per minute.~~

Claim 83 (currently amended): The process of claim 82, further comprising forming the fibrin material into a polymerized gel, ~~wherein the thrombin present in the solution is at least partly activated when submitting the solution to a mechanical or physical treatment, advantageously in a mold or in dies.~~

Claim 84 (currently amended): ~~A~~ The process of claim 82 for making a shaped article made at least partly of a self-supported fibrin of claim 37, further comprising the steps of:
stretching the gel along a longitudinal axis thereof sufficient to elongate the length of the gel from about 5% to about 100%.~~mixing substances containing particles selected from the group consisting of fibrinogen, inactive thrombin, derivatives thereof and mixtures thereof;~~
~~subjecting the mixture to a mechanical or physical treatment, in a mold or in dies;~~
~~wetting or moistening the particles; and~~
~~partially activating thrombin to obtain a shaped article~~

Claim 85 (new): The process of claim 82 wherein the activatable thrombin is photoactivable thrombin, the method further comprising applying a radiation energy to the hydrated component to activate the photoactivable thrombin.

Claim 86 (new): The process of claim 85 wherein the fibrin material has a thickness, the method further comprising adjusting the radiation energy to selectively determine the desired thickness of the fibrin material.

Claim 87 (new): The process of claim 85 wherein the fibrin material has a porosity, the method further comprising adjusting the radiation energy to selectively determine the desired porosity of the fibrin material.

Claim 88 (new): The process of claim 85 further comprising applying a first radiation energy to a first portion of the hydrated component and applying a second radiation energy to a second portion of the hydrated component, the first portion having at least one property different than the second portion.

Claim 89 (new): The process of claim 88 wherein the at least one property is selected from the group consisting of thickness, porosity, and a combination thereof.

Claim 90 (new): The elongated structure of claim 37 wherein the elongated structure is permanently elongated.

Claim 91 (new): The elongated structure of claim 90 wherein the fibrin material has a pre-stretched length, the elongated structure having a length from about 5% to about 100% greater than the pre-stretched length.

Claim 92 (new): The elongated structure of claim 37 wherein the fibrin material is a gel having a water content wherein substantially no water is removed when the gel is centrifugated at about 1000 rpm to about 2500 rpm.